



T E C H N I C A L B R I E F

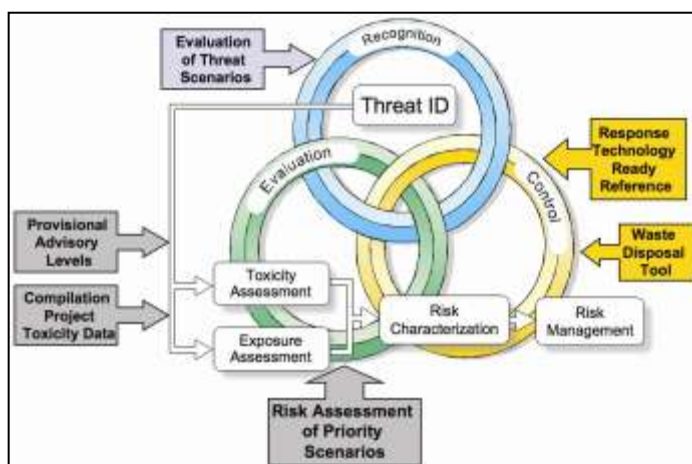
Emergency Consequence Assessment Tool

Background

EPA's National Homeland Security Research Center (NHSRC), Threat and Consequence Assessment Division (TCAD), is responsible for developing risk-related information as well as risk assessment and communication systems and tools. As part of this responsibility, TCAD is developing the Emergency Consequence Assessment Tool (ECAT), which enhances the ability of risk managers to respond to potential terrorist attacks more quickly and efficiently. The ECAT includes a library of key risk assessment and consequence management information and an interactive calculator for site-specific applications.

What Does the ECAT Do?

The ECAT functions as a “defensive playbook” that allows risk managers to prepare for emergency responses, using information developed from a series of priority threat scenarios. It combines the decision-making processes of the emergency response paradigm and the risk assessment paradigm into a tool that provides for rapid communication and informed risk management of chemical and biological warfare agents. The pilot program, Version 1.0, includes two scenarios that offer users the ability to enter a contaminant characteristic (e.g., white powder found in an office) and receive rapid and accurate information needed to respond to the hazard identified. The ECAT offers users a one-stop source for risk-related information. It provides results to user queries rapidly and in a manner suitable for immediate use at the cleanup site. This ability to provide results in the field facilitates real-time risk communication and allows response activities to continue in real time.



The capabilities of the ECAT include:

- Quantification of chemical hazards and biological risks
- Support to emergency responders by providing health-based information and recommendations for personal protective equipment (PPE), standard operating procedures (SOPs), site controls, and decontamination procedures
- Support to risk managers by providing target cleanup levels and techniques for clearance sampling, remediation, and restoration

The ECAT uses a secure EPA Web site server that gives authorized users immediate access to assistance. Traditional tools provide only chronic exposure information and users must scroll through large volumes of information to find the needed risk-related information. The ECAT also provides computer links to decontamination methods; risk mitigation methods; and information related to toxic agents, site controls, and PPE.

The ECAT operates through user-input queries, providing step-by-step guidance for the management of risks and information that is specific to the contaminant agent. Contaminant-specific information includes recommendations for evacuation planning, sample planning, treatment, decontamination, cleanup, confirmatory sampling, and disposal options. The ECAT also provides hyperlinks to other EPA databases and models, including Computer-Aided Management for Emergency Operations (CAMEO), the Water Contaminant Information Tool (WCIT), and the EPANET water quality modeling system.

Risk characterization information provided by the ECAT includes one-page fact sheets or templates used to communicate risk-related conclusions to the public. These fact sheets also provide information on preventive or emergency response measures for the contaminant agent, contaminant characteristics, exposure routes, symptoms and signs of exposure, response-related PPE, and sampling methodologies.

Version 1.0 is currently being beta tested with EPA personnel, including on-scene coordinators. It can be scaled up to Version 2.0 without significant reprogramming. Version 2.0 will include ten threat scenarios and be available for broad-based beta testing in August 2005.

INTERNET PEER REVIEW DRAFT • DO NOT CITE OR QUOTE • FOR OFFICIAL USE ONLY

Home User
Admin User


ECAT Home
Fast Time User
Help
Comments/Log

Administration
Account Management
Event Calculators
Content Management
Event Management

Tools
Quick Reference Tables
Information Resources
Help/Contact Us
Local Profiles

External Links
CAMEO
EPA/OS
VOC
Chemosite


Notification Centers
Email Textual Alerts
VOC
Log Out




Emergency Consequence Assessment Tool

Search

Event Summary: x ME: Parathion	
Mile: Liquid	Pipeleak(s): Unknown
IPC: Unknown	Follow-up(s): Unknown
Unit: Unknown	Duration(s): Unknown
Event Date/Time: 2011/01/01 08:00 AM	
Web Version: 0.2.2 8/14/02	

 THIS EVENT IS READ-ONLY



Threat Recognition

Evolution: Threat Assessment, Exposure Assessment

Control: Risk Assessment, Risk Management

Threat: Threat Identification

THREAT IDENTIFICATION: Reported Symptoms



Symptoms
Psychiatric
General
Skin
Eyes
Nose
Throat
Lungs
Heart
Gastrointestinal
Genitourinary
Musculoskeletal
Neurological

Select all boxes that apply.

I - Immediate symptoms
D - Delayed symptoms

Show symptoms: ☐ ME ☐ Parathion specific

I D

PSYCHOTRIC

☐ Agitation

☐ Depression

☐ Anxiety

☐ Nervousness

...[More]

GENERAL

...[More]

Threat Identification (Current Selection)

- General Population / Agent Specific
- Threat Information Identification
- Agent specific Information

Exposure Assessment

- Respiratory, Dermal, and Exposure Parameters
- Exposure Concentration

Toxicity Assessment

- Toxicity Values

Risk Characterization

- Risk Characterization
- Deterministic Analysis

Risk Management

- Evacuation /
- Shut Down or Repair
- Personal Protective

ECAT users include emergency planners and trainers, emergency responders, risk assessors, and on-site coordinators.

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